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10/685,839	10/14/2003	Takeshi Yokota	83394.0016	8458

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EXAMINER	
FEENEY, BRETT A	
ART UNIT	PAPER NUMBER
3624	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	**Application No.** 10/685,839	**Applicant(s)** YOKOTA ET AL.	
	Examiner BRETT FEENEY	**Art Unit** 3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 June 2009*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-7* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of the Claims

1. The following **NON-FINAL** Office Action is in response to Applicant's submission received July 16, 2008.

2. Claims 1-18 were subject to a restriction requirement wherein Applicant elected without traverse, to pursue claims 1-7 in the instant application. Claims 8-18 were canceled.

3. Claims 1-7 are currently pending and have been examined.

Objections

4. Claims 1-7 are objected to because of the following informalities:

- Claim 1 is directed to a system however the limitations recited in the claim appear to be directed towards software instructions (i.e. a computer readable medium). Applicant may want to consider amending the claim such that is directed towards a computer readable medium having instructions tangibly embedded thereon when executed by a computer (or processor) performs the functions recited in the claim; **OR** consider amending the claim such that system components are recited in the body of the claim and the steps recited in the body of the claim are recited with their coinciding (appropriate) system component. Appropriate correction is required. Claims 2-6 are objected to as depending from claim 1.

- Claim 1 recites "and" on multiple occasions following a limitation. “And” should only be recited after the penultimate limitation in the claim. Appropriate correction is required.
- Claim 1 recites “by following equation” prior to reciting the mutual-correlation equation. The claim should properly recite by [] equation:. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- Claims 1-7 appear to by a hybrid claim wherein the preamble of the claim is directed to a system and the limitations recited in the body of the claim appear to be directed to computer instructions. Therefore this claim is vague and indefinite. The Examiner has interpreted the claim as being directed to a computer readable medium having instructions to perform the functions recited in the claim. Appropriate correction is required (see **Objections** *supra*).

- Claim 1 recites “based on a user input, selecting from the group of schemes consisting of an estimation of frequency distribution, an estimation of mutual-correlation of estimated value pattern, an estimation of standard deviation, an estimation of time-series information, and an estimation of fit to a predetermined pattern”. However the steps recited following this limitation are directed towards only one scheme “an estimation of mutual-correlation of estimated value pattern” and **NOT** other schemes including “an estimation of frequency distribution”, “an estimation of standard deviation”, “an estimation of time-series information”, or “an estimation of fit to a predetermined pattern”. Therefore, this claim is vague and indefinite. The Examiner has interpreted this claim to mean that the user input is to select an estimation of mutual correlation of estimated value pattern scheme, as none of the other schemes are recited in the claim. Appropriate correction is required. Claims 2-7 are rejected as depending from claim 1.
- Claim 1 recites “wherein forecast of the variations of the plurality of parameters are obtained by using random numbers”. However it is not clear how the variations of the parameters can be obtained using any random number. By contrast, the method would not work using any random number, therefore the claim is vague and indefinite. The Examiner has interpreted this limitation to mean that forecast variations are obtained. Further, the Examiner notes: Applicant does disclose a method of calculating variations of the parameters using standard normalized random numbers computed by a specific Molo algori[th]m (see paragraph 0056).

- Claim 1 recites “estimated values for variations of the at least two parameters”. However, it is not clear whether the “estimated values for variations” are the same “probability distribution variations” or whether they are different values for variations. Therefore the claim is vague and indefinite. The Examiner has interpreted the variations to be the same.
- Claim 1 recites “wherein the forecast of the variations of the plurality of parameters". However, it is not clear whether the plurality of parameters is referring to the "probability distribution variations of parameters" or the “estimated values for variations of the at least two parameters”. Further, it is not clear whether all the aforementioned variations are drawn to the same calculation or whether each variation is calculated independently and represents a different number.
- Claim 1 recites “wherein forecast of the variations”. However it is not clear whether the claim is directed to forecasts (meaning more than one) or a forecast (meaning a single forecast). Therefore, the claim is vague and indefinite. The Examiner has interpreted this limitation to mean that a forecast is obtained.
- Claim 1 recites “computing estimated values for variation of at least two parameters”. However, it is not clear what Applicant means by computing estimated values. For example, is an ANOVA performed, is covariance between two parameters calculated, is a historical average calculated, etc. Therefore the claim is vague and indefinite. The Examiner has interpreted the limitation to

mean that any old and well known equation for calculating variation may be applied.

- Claim 1 recites “wherein forecast of the variations of the plurality of parameters are obtained". However, it is not clear how forecast of the variations are obtained. Are the numbers provided by historical values, by looking them up in chart, are they calculated using an algorithm, etc. Therefore the limitation is vague and indefinite. The Examiner has interpreted the limitation to mean that variations of the parameters are obtained by any old and well known means.
- Claim 1 recites “assessing the project by determining whether one of either said estimated values of parameters of at least one process of the processes included in the project, or a comparison involving said estimated values satisfy a predetermined criterion”. However, it is not clear how determining whether the estimated values of parameters is included, or a comparison of the values is used to assess a project. Further, “a comparison involving said estimated values satisfy a predetermined criterion” does not appear to be written in idiomatic English and therefore the Examiner is not clear as to what Applicant is trying to claim. Therefore, the limitation is vague and indefinite. The Examiner has interpreted the limitation to mean the project is assessed by either calculating the variation of parameters or determining that the parameters satisfy a predetermined criteria.
- Claim 1 recites “the selected assessment scheme”. The selected assessment scheme does not have antecedent basis in the claim. The Examiner has

interpreted this limitation to mean that the assessment scheme is referring to the step of “assessing the project”. Appropriate correction is required.

- Claim 5 recites “excluding an arbitral process selected by an user". An arbitral process would generally be used to describe a process that it is resulting from arbitration. Therefore, “an arbitral process” does not make sense in context of this claim and the limitation is vague and indefinite. The Examiner has not given any weight to this limitation.

Rejections under § U.S.C. 101

6. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

- Claims 1 – 7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

- Claims 1 – 7 are directed to an apparatus. However, the recited components of the apparatus appear to lack the necessary physical components (hardware) to constitute a machine or manufacture under § 101. Therefore, these claim limitations can be reasonably interpreted as computer program modules or software *per se*. The claims are directed to functional descriptive material *per se* and hence non-statutory. Applicant may consider amending the claims such that the hardware components are recited in the body of the claim. Further, Applicant may consider reciting the claimed functions with their corresponding structural components.

Rejections under § U.S.C. 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koller et al., US 2002/0103793, (hereinafter Koller), in view of Goldman et al., 6,952,688, (hereinafter Goldman), further in view of Njemanze et al., US 7,219,239, (hereinafter Njemanze).

Claim 1

Koller discloses a system including computer programs recorded on computer readable medium for assessing a project comprising a plurality of processes by computing forecasts of said project based on a set of information, the computer programs instructing a computer to perform the functions comprising:

- *selecting from the group of schemes consisting of an estimation of mutual-correlation of estimated value pattern* (see paragraph 0344; noting the schema measures the correlation of variables Y and Z.);
- *based on the selected assessment scheme, using:* (*Id.* Noting the correlation scheme. Further, the Examiner notes process planning information of each process included in the project, up-to-date actual process information of said each process of the project, and forecast model information of said each process of the project that defined as a probability distribution variations of parameters of said processes, which are quantitative values of the project are all non-functional descriptive data that are not functionally involved in the claim. The Examiner notes in order for the data to be functionally involved in the claim, Applicant may consider amending the claim such that limitation(s) recite how the data is used in the calculation.);
- *computing estimated values for variations of at least two parameters of the parameters* (see paragraphs 0325-0332; noting “Parameter Estimation” includes calculating frequencies for variables. Further see paragraph 0251; noting the distribution of a given variable is measured.);

- *wherein forecast of the variations of the plurality of parameters are obtained* (see paragraph 0251; noting "[t]he distribution P.sub.D(A.sub.1, . . . , A.sub.k) is a projection [(i.e. forecast)] of the joint distribution over the entire set A.sub.1, . . . , A.sub.n of value attributes of R. We can define this joint distribution P.sub.D(A.sub.1, . . . , A.sub.n) directly from the data via an imaginary process, where we sample a tuple r from R, and then select as the values of A.sub.1, . . . , A.sub.n the values of r.A.sub.1, . . . , r.A.sub.n.");
- *assessing the project by determining whether one of either said estimated values of parameters of at least one process of the processes included in the project, or a comparison involving said estimated values satisfy a predetermined criterion* (see paragraph 0160; noting that the project assessment identifies "all three variants" are present and describe the relationship of the variants given their attribute values and reference slots.);
- *a mutual-correlation between the sequence X and the sequence Y is computed to assess how high the mutual-correlation therebetween is* (see paragraph 0344; noting that the mutual-correlation is calculated.);

Koller does not explicitly disclose, however in analogous art Njemanze teaches:

- *wherein the selected assessment scheme is the estimation of mutual-correlation of estimated value pattern, in which a first process is selected from the processes of the project, estimated values for variations calculated for the first process are put into a sequence, one of estimated values for the variations is set as a first reference estimated value, and other estimated values for the variations of the* *first process are normalized based on the first reference estimated value so as to obtain a sequence X*, [and a] *second process is selected from the processes of the project, estimated values for the variations calculated for the second process are put into a sequence, one of the estimated values for the variations is set as a second reference estimated value, and other estimated values for the variations of the second process are normalized based on the first reference estimated value so as to obtain a sequence Y*, (see FIG 2 and associated text; noting data is normalized" according to schema and a field or field value. Further noting, the correlation rules engine provides information relating attributes of events from a plurality of sources. Further noting, event data is streamed, logged, normalized and parsed.)

It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to combine the system including computer programs recorded on computer readable medium for assessing a project comprising a plurality of processes by computing forecasts of said project based on a set of information disclosed by Koller with the step of normalizing the process to a reference taught by Njemanze yielding the predictable result of normalized projected mutual-correlation between processes, thereby allowing users to understand the relationships between processes. Further since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Claim 3

Koller/Njemanze teaches the limitations above. Furthermore Koller discloses:

- A project assessment system as defined in Claim 1, wherein said computing function further includes creating graphs of frequency distribution (see FIG 9 and associated text; noting FIGs 9(a) - 9(c) are graphs showing the average % error at different storage sites for a given storage size.).

Claim 4

Koller/Njemanze teaches the limitations above. Furthermore Koller discloses:

- *wherein said computing function further includes, based on the forecasts of the variations of the parameters obtained, finding a variation pattern of the forecasts of the variations for one process of the processes of the project, and finding variations for another processes of the project, whose variation pattern has a positive mutual correlation with said found variation pattern, thereby to assess the project* (see FIG 6(a) and associated text; noting h,m,t and h,h,t have similar joint probability distributions.).

9. Claims 2, 5, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koller et al., US 2002/0103793, (hereinafter Koller), in view of Njemanze et al., US 7,219,239, (hereinafter Njemanze), further in view of Ishizuku et al., US 6,594,598, (hereinafter Ishizuku).

Claim 2

Koller/Njemanze teaches the limitations above. Koller/Njemanze does not explicitly disclose, however in analogous art, Ishizuku teaches:

- wherein said parameters include at least one of ending date (see column 2, lines 43-56; noting “measured data obtained by measuring the characteristics of a product at a time one of the process steps, performed on the product, is finished".).

It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to combine the system including computer programs recorded on computer readable medium for assessing a project comprising a plurality of processes by computing forecasts of said project based on a set of information taught by Koller/Njemanze with the step of computing standard deviations to assess the project taught by Ishizuku yielding a predictable result.

Claim 5

Koller/Njemanze teaches the limitations above. Koller/Njemanze does not explicitly disclose, however in analogous art, Ishizuku teaches:

- A project assessment system as defined in Claim 1, wherein said computing function further includes, based on the forecasts of the variations of the parameters obtained, computing standard deviations (A) of estimated values of a plurality of parameters of objective processes, and standard deviations (B) of estimated values of the plurality of parameters of the objective processes and further using the standard deviations (A) and the standard deviation (B) to assess the project (see at least FIG 16(a)-(b) and associated text; noting standard deviations for adjusted processes are assessed in relation to each other).

It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to combine the system including computer programs recorded on computer readable medium for assessing a project comprising a plurality of processes by computing forecasts of said project based on a set of information taught by Koller/Njemanze with the step of computing standard deviations to assess the project taught by Ishizuku yielding a predictable result.

Claim 6

Koller/Njemanze teaches the limitations above. Koller/Njemanze does not explicitly disclose, however in analogous art, Ishizuku teaches:

- A project assessment system as defined in Claim 1, wherein said computing function further includes computing a time-series data of variations of said parameters based on said actual progress information, up to a time of carrying out assessment, and a time-series data of said variations of said parameters from a time of carrying out assessment to a future time, and the assessing function makes the determination base in part on mutual correlations between the time-series data (see column 2, lines 57-63; noting data is measured at time point, prior to the performance of the subsequent process step such that the quality and performance of the final product is predicted more accurately.).

It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to combine the system including computer programs recorded on computer readable medium for assessing a project comprising a plurality of processes by computing forecasts of said project based on a set of information taught by Koller/Njemanze with the step of assessing time series data to assess the project taught by Ishizuku yielding a predictable result.

Claim 7

Koller/Njemanze teaches the limitations above. Koller/Njemanze does not explicitly disclose, however in analogous art, Ishizuku teaches:

- *wherein said computing function further includes computing, by using a group of time-series data comprising of time-series data of variations of said parameters based on said actual progress information, up to a time of carrying out assessment, and time-series data of said variations of said parameters from a time to carry out assessment to a future time, a degree of mutual correlation of a said group of time-series data by setting a specific critical condition for variation range of at least one of said parameters ending date and the assessing function makes the determination base in part on the degree of mutual correlation between the time-series data* (*Id.* at **Claim 2** and **Claim 6** *supra*. Further see column 2, lines 64 *et seq.*; noting the performance of the product is a critical function that is measured and ranked.).

It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to combine the system including computer programs recorded on computer readable medium for assessing a project comprising a plurality of processes by computing forecasts of said project based on a set of information taught by Koller/Njemanze with the step of computing assessing time-series data by setting control limits for measured data taught by Ishizuku yielding a predictable result.

Conclusion

The following references are considered relevant to the instant application, however they were not applied as prior art in the instant office action.

- Poelstra, US 5,166,878
- Hively et al., US 5,815,413
- Driskell et al., US 6,072,493
- Kauffman, US 2001/0032029
- Feldman et al., US 6,587,781
- Ishizuku et al., US 6,594,598
- Takanbe, US 6,606,574
- Shirasishi et la., US 6,621,508
- Nonaka et al., US 2003/0179241 and US 7,269,798
- Yokata et al., US 2003/0225605 and US 7,318,039
- Rudolf, US 6,728,297
- Feldman et al., US 2005/0080552
- Goldman et al., 6,952,688
- Takami et al., US 7,209,846
- Paris, US 7,243,064
- Fishman, US 2008/0082388

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **Brett Feeney** whose telephone number is **571.270.5484.** The Examiner can normally be reached on Monday-Thursday, 7:30am-6:30pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **BRAD BAYAT** can be reached at **571.272.6704**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://portal.uspto.gov/external/portal/pair . Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

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/BRETT FEENEY/

Examiner, Art Unit 3624

/Scott L Jarrett/

Primary Examiner, Art Unit 3624